Prevalence of contagious mastitis bovine pathogens in dairy herds from Minas Gerais Holstein Association (previous results) - <u>Souza G.N.</u>\*<sup>1</sup>, Brito M.A.V.P.<sup>1</sup>, Lange C.C.<sup>1</sup>, Silva M.R.<sup>1</sup>, Hylario S.M.<sup>2</sup>, Bruno A.F.<sup>2</sup>, Ozório R.S.<sup>2</sup>

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The real prevalence of contagious mastitis pathogens was calculated in the herds belonging to Minas Gerais Holstein Association (MGHA). MGHA is composed by 112 dairy herds with almost 6,000 cows. The simple randomized sampling for finite population was used to select the herds. One bulk milk sample was collected from 40 herds to identify Staphylococcus aureus and Streptococcus agalactiae using selective media. The real prevalence of S. aureus and S. agalactiae was calculate based on apparent prevalence, sensitivity and specificity from previous study performed in Brazil. The 95% confidence interval (CI 95%) for real prevalence was calculated with data of sensitivity and specificity for one bulk milk sample. The real prevalence of S. aureus and S. agalactiae was 93% (CI 95% = 86% -100%) and 41% (CI 95% = 26% - 56%). The results showed high prevalence of S. aureus and S. agalactiae in these herds. The adoption of control measures considering epidemiological features of each pathogen and prevalence of infected cows within each herd should be considered for objective of reducing the new infection rate and infection time. The main approach in control and prevention of S. agalactiae should be directed to eradication of this pathogen through treatment of infected cows. In contrast, the approach in control measures of S. aureus should be based on culling of cows with chronic infection. The information about the main risk factors for infected herds and cows by S. aureus and S. agalactiae can be useful on making decision for adoption of specific control measures.

Key-words: Staphylococcus aureus, Streptococcus agalactiae, herd prevalence

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Prevalence study on contagious pathogens of bovine mastitis in a specific dairy herds population can be used to establish strategies for mastitis control and prevention. Among mastitis contagious pathogens, *Staphylococcus aureus* and *Streptococcus agalactiae* have a special approach. In 2007, the prevalence of the study of *S. aureus* and *S. agalactiae* in United States was 43,0% and 2,6%, respectively. The objective of study was calculate the real prevalence of *S. aureus* and *S. agalactiae* in dairy herds belonging to Minas Gerais Holstein Association (MGHA).

## MATERIAL E METHODS

MGHA is composed for 112 dairy herds and almost 6.000 cows under milk recording production. The simple randomized sampling for finite population was used to select the herds. One bulk milk sample was collected from 40 herds to identify *Staphylococcus aureus* and *Streptococcus agalactiae* using selective media. The real prevalence of *S. aureus* and *S. agalactiae* was calculate based on apparent prevalence, sensitivity and specificity from previous study performed in Brazil. The 95% confidence interval (Cl 95%) for real prevalence was calculated with data of sensitivity and specificity for one bulk milk sample. The microbiological analysis was performed in bulk tank milk samples according National Mastitis Council.

Figure 1 - Sel manitol agar:

Figure 1 - Sal manitol agar: S. aureus colonies



Figure 2 - TKT agar: *S. agalactiae* colonies



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The real prevalence of S. aureus and S. agalactiae was 93%

## CONCLUSION

The prevalence of *S. aureus* was high and can be considered the main challenge related to udder health due to impossibility of eliminate this pathogen from dairy herd. Although the prevalence of *S. agalactie* have been twice lower than *S. aureus*, the prevalence was also high. How is possible performed the erradication of *S. agalactiae* from dairy herds with subclinical mastitis therapy, this measure control should be performed with technical support.